

Name _____

Multiplying Polynomials

There are two methods you can use to multiply polynomials. FOIL or Distribution

Distribution Works for all polynomials Example: $(2x + 3)(3x^2 + 4x - 1)$	Foil Works only for a binomial x binomial 2 terms x 2 terms Example: $(2x + 3)(4x - 1)$ <u>F</u> <u>O</u> <u>I</u> <u>L</u> i u n a r t s s s s i t t i d d e e
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Choose a method and multiply the polynomials.

1. Method: _____ $(4x + 1)(3x - 2)$	2. Method: _____ $(5x - 3)(x - 2)$
3. Method: _____ $(x + 2)(x^2 + 3x - 1)$	4. Method: _____ $(x - 4)(x^2 + 4x + 16)$

Multiply the following polynomials mentally.

5. $(x + 3)(x - 2)$

6. $(x - 4)(x + 4)$

Now you try!

7. $(x - 1)(x + 8)$ _____

8. $(x + 6)(x + 9)$ _____

9. $(x + 2)(x - 2)$ _____

10. $(x - 7)(x + 2)$ _____

11. $(x - 3)(x - 7)$ _____

Expand Then Multiply Mentally

12. $(2x - 1)^2$

13. $(x + 3)^2$

14. $(x - 5)^2$

15. $(3x + 2)^2$